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## ABOUT THIS DOCUMENT

- **Who is responsible for this project?**
- **What is the purpose of this study?**
- **Why study impacts to the environment?**
- **What types of impacts will be evaluated?**
- **How are impacts evaluated?**

### **Who is responsible for this project?**

The Federal Highway Administration (FHWA), in partnership with the Utah Department of Transportation (UDOT) and Layton City, recognized the need for transportation improvements in Layton, Utah. This Environmental Impact Statement (EIS) has been prepared for and under the direction of FHWA in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR §§1500-1508); and FHWA environmental impact and related procedures (23 CFR §771). FHWA must have an approved Final EIS and signed Record of Decision (ROD) prior to final design activities, property acquisition, purchase of construction materials, or commencement of project construction (23 CFR §771.113).

The following agencies were also included in the preparation of the EIS as participating agencies:

- Utah Transit Authority (UTA)
- Wasatch Front Regional Council (WFRC)

These agencies have played an important role in the determination of the Purpose and Need for the project; in the identification, development, and screening of alternatives; and in the appropriate methodology and level of detail for the impacts analysis for the Preferred Alternative.

### **What is the purpose of this study?**

This EIS has been conducted to assist local, state, and federal decision-makers in identifying the best course of action to address current and projected traffic demand and operations for the Layton Interchange (I-15 Exit 330) in Layton, Utah. This EIS has been prepared in accordance with the provisions of the NEPA and the corresponding regulations and guidelines of the FHWA, the lead federal agency. Specifically, the objective of NEPA and this EIS is to evaluate proposed courses of action and make decisions in the best overall public interest based upon a balanced consideration of the need for safe and efficient transportation; the social, economic, and environmental impacts of the proposed improvements; an analysis of a reasonable range of alternatives; stakeholder input; and national, state, and local environmental protection goals.

### **Why study impacts to the environment?**

This EIS has been prepared to comply with NEPA. NEPA requires that a detailed analysis be prepared if any federal agency is undertaking a "major federal action significantly affecting the quality of the human environment." In this detailed study, the federal agency must include an assessment of the impacts to the environment from the proposed action and any adverse effects that cannot be avoided, should the proposed action be implemented. In addition, the agency must include a reasonable range of alternatives to the proposed action, the relationship between short-term uses of the environment and long-term productivity, and any irreversible or irretrievable commitment of resources if the proposed action were to occur. The purpose of NEPA is to provide the decision makers with the best available information so that they can make an informed decision about the project.



The CEQ is the regulating agency for NEPA and has developed a set of regulations that provide more detailed information about its implementation. These regulations have specific requirements of what should be included in an EIS (40 CFR §1502).

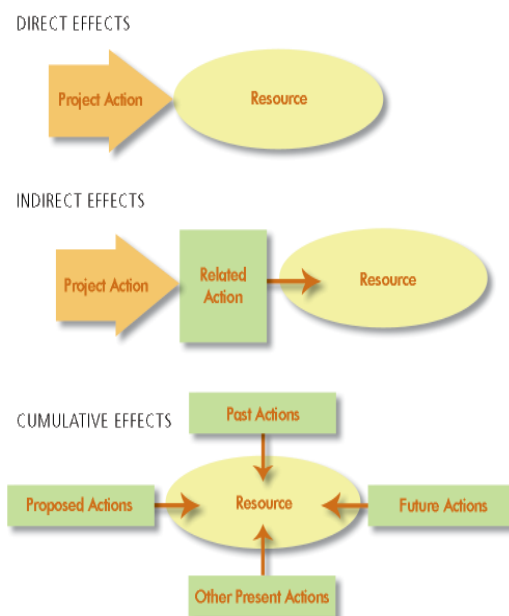
## What type of impacts will be evaluated?

There are three types of impacts that may occur when an action takes place: direct impacts, indirect impacts, and cumulative impacts. Each are defined and discussed below. The terms “impact” and “effect” are used interchangeably throughout this document, because they share the same meaning according to the CEQ regulations (40 CFR 1508.8).

“*Direct impacts*” are defined by the CEQ as impacts, “which are caused by the action and occur at the same time and place” (40 CFR §1508.8(a)).

“*Indirect impacts*” are defined in 40 CFR §1508.8(b) as those impacts “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”

The CEQ defines “*cumulative impacts*” in 40 CFR § 1508.7 as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”



Impacts are analyzed to determine how an alternative may affect environmental resources if it were implemented. Each alternative under consideration may have impacts of varying degrees. These variances, or differences, are used by the decision makers to evaluate and compare alternatives.

## How are impacts evaluated?

FHWA has developed a set of regulations (23 CFR §771) to help guide its agency in applying NEPA and the CEQ regulations. In addition, FHWA published Technical Advisory T 6640.8A in 1987 to help further guide the agency in preparation of NEPA documents. Guidance for noise abatement due to construction and highway traffic noise and mitigation of environmental impacts to privately-owned wetlands can be found in 23 CFR §772 and §777, respectively. Internet access to this information can be found at: [www.environment.fhwa.dot.gov/projdev/index.asp](http://www.environment.fhwa.dot.gov/projdev/index.asp).

FHWA uses the term “secondary” for indirect impacts, and gives it similar meaning as the CEQ regulations. They have published the Position Paper: *Secondary and Cumulative Impact Assessment in the Highway Project Development Process* for further guidance on indirect and cumulative impacts. Indirect and cumulative impacts must be addressed when evaluating a proposed project, especially in terms of the impacts from induced growth (i.e. new businesses, industry, residences). FHWA must evaluate indirect and cumulative impacts from induced growth in its analysis, but is not responsible for mitigating actions that are beyond its control.



## LIST OF ACRONYMS

ADT	Annual Daily Traffic	MSAT	Mobile Source Air Toxics
AASHTO	American Association of State Highway and Transportation Officials	NAAQS	National Ambient Air Quality Standards
ac	acre(s)	NATA	National Air Toxics Assessment
ACHP	Advisory Council on Historic Preservation	NEPA	National Environmental Policy Act
AHPA	Archeological and Historic Preservation Act	NCHRP	National Cooperative Highway Research Program
APE	Area of Potential Effects	NHPA	National Historic Preservation Act
ARPA	Archeological Resources Protection Act	NOAA	National Oceanic and Atmospheric Administration
BMP	Best Management Practice	NOI	Notice of Intent
BRT	Bus Rapid Transit	NOT	Notice of Termination
CAAA	Clean Air Act Amendments	NRCS	Natural Resources Conservation Service
CLG	Certified Local Government	NRHP	National Register of Historic Places
CSB	Community Sounding Board	NWI	National Wetland Inventory
CSS	Context Sensitive Solutions	PM <sub>2.5</sub>	Particulate Matter with a diameter of less than 2.5 micrometers
CEQ	Council on Environmental Quality	PM <sub>10</sub>	Particulate Matter with a diameter of less than 10 micrometers
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	ppm	parts per million
CERCLIS	Comprehensive Emergency Response, Compensation, and Liability Information System	RCRA	Resource Conservation and Recovery Act
CFR	Code of Federal Regulations	RLS	Reconnaissance Level Survey
cfs	cubic feet per second	ROD	Record of Decision
CMS	Congestion Management System	RTP	Regional Transportation Plan
CO	Carbon Monoxide	SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
CWA	Clean Water Act	SHPO	State Historic Preservation Office
D&RGW	Denver and Rio Grande Western	SIP	State Implementation Plan
dba	A-weighted decibels	SPUI	Single Point Urban Interchange
DERR	Division of Environmental Response and Remediation	STIP	Statewide Transportation Improvement Program
DOEFOE	Determination of Eligibility and Finding of Effect	SWPPP	Storm Water Pollution Prevention Plan
DOT	Department of Transportation	TCP	Traditional Cultural Property
EA	Environmental Assessment	TDM	Transportation Demand Management
EIS	Environmental Impact Statement	TIP	Transportation Improvement Plan
EPA	Environmental Protection Agency	TNM	Traffic Noise Model
ESA	Endangered Species Act	TSM	Transportation System Management
FEMA	Federal Emergency Management Agency	UDAQ	Utah Division of Air Quality
FHWA	Federal Highway Administration	UDEQ	Utah Department of Environmental Quality
FIRM	Flood Insurance Rate Map	UDOT	Utah Department of Transportation
FPPA	Farmland Protection Policy Act	UDWQ	Utah Division of Water Quality
ft/ft <sup>2</sup>	foot/square foot	UDWR	Utah Division of Wildlife Resources
FTA	Federal Transit Administration	UGS	Utah Geological Survey
HHS	U.S. Department of Health and Human Services	UPDES	Utah Pollutant Discharge Elimination System
HOV	High Occupancy Vehicle	UPRR	Union Pacific Railroad
HUD	Housing and Urban Development	UP&L	Utah Power and Light
ILS	Intensive Level Survey	USC	United States Code
IRIS	Integrated Risk Information System	USACE	United States Army Corps of Engineers
L(eq)	Equivalent (or average) Noise Level	USDOI	United States Department of the Interior
LOS	level-of-service	USFWS	United States Fish and Wildlife Service
LRT	Light Rail Transit	UST	Underground Storage Tank
LUST	Leaking Underground Storage Tank	UTA	Utah Transit Authority
LWCFA	Land and Water Conservation Fund Act	vpd	vehicles per day
MAG	Mountainland Association of Governments	vmt	vehicle miles traveled
mi	mile(s)	WIS	Wetland Identification Study
MOA	Memorandum of Agreement	WFRC	Wasatch Front Regional Council
MOU	Memorandum of Understanding		
MPO	Metropolitan Planning Organization		

## LIST OF TECHNICAL REPORTS

Technical Report Title	Prepared By	Contact
<i>A Cultural Resource and Paleontological File Review of the Proposed Layton Interchange Project, Layton Davis County, Utah</i>	EarthTouch, LLC Lorna Billat 3135 North Fairfield Road, Suite D Layton, Utah 84041	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Community Social Assessment</i>	Richard S. Krannich, PhD Rocky Mountain Social Services P.O. Box 184 Paradise, Utah 84328	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Selective Reconnaissance Survey Layton and Kaysville, Davis County, Utah</i>	Nancy Calkins Historic Preservation Specialist	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>South Layton Interchange Environmental Impact Statement Traffic Study Report</i>	Horrocks Engineers	Jayson Cluff Mack Christensen Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Wetland Identification/ Wetland Delineation Layton Interchange EIS Davis County, Utah</i>	Wetland Resources Todd Sherman 182 East 300 North Logan, Utah 84321	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Layton Interchange Technical Noise Report</i>	Horrocks Engineers	Nicole Tolley Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Land Use/Value Assessment Memorandum</i>	LECG Phil Cook 5107 South 900 East Suite 200 Salt Lake City, Utah 84117	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Economic Impact Assessment Memorandum</i>	John Keith 3520 Old Mail Hill Utah State University Logan, Utah 84322-3530	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003
<i>Geotechnical Assessment</i>	RB&G Brad Price 1435 West 820 North Provo, Utah 84601	Brad Powell Judy Imlay Horrocks Engineers P.O. Box 377 American Fork, Utah 84003

## LIST OF WORKS CITED

### **American Association of State Highway and Transportation Officials (AASHTO)**

- A Policy on Geometric Designs of Highways and Streets
- Highway Capacity Manual

### **Council on Environmental Quality (CEQ)**

- Considering Cumulative Effects Under the National Environmental Policy Act

### **Davis County**

- Davis County Geographic Information System

### **Davis County School District**

- Student Neighborhood Access Plan
- [www.davis.k12.ut.us](http://www.davis.k12.ut.us)

### **Federal Highway Administration (FHWA)**

- FHWA Actions to Address Environmental Justice in Minority Populations and Low-income Populations, December 2, 1998
- Highway Traffic Noise Analysis and Abatement Policy and Guidance Report
- A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives

### **Layton City**

- Layton City Master Street Plan
- Layton City Current Zoning Map
- Layton City Future Land Use Map
- [www.laytoncity.org](http://www.laytoncity.org)

### **State of Utah**

- Governor's Office of Planning and Budget (2006)
- Utah Division of Environmental Response and Remediation (DERR) Interactive Map
- Utah Department of Workforce Services
- Utah PM<sub>10</sub> Maintenance Provisions for Salt Lake County

### **Salt Lake County**

- Salt Lake County Stormwater Technical Data Report (2000)

### **U.S. Census Bureau**

- <http://factfinder.census.gov>
- Summary File 1
- Summary File 3

### **U.S. Environmental Protection Agency (EPA)**

- Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Non-attainment and Maintenance Areas
- Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources
- National Ambient Air Quality Standards

### **Utah Department of Transportation (UDOT)**

- I-15 Corridor Plan - Kaysville to Ogden (2005)
- South Layton Interchange Environmental Assessment (2005)
- Mountain View Corridor Environmental Impact Statement
- SR 108 Environmental Impact Statement
- Syracuse Road; 1000 West to 2000 West, Syracuse Final Environmental Impact Statement and Section 4(f) Evaluation
- Noise Abatement Policy
- Air Quality Hotspot Manual
- Relocation Manual
- Statewide Transportation Improvement Program

### **Utah Transit Authority (UTA)**

- Weber County to Salt Lake City Commuter Rail Project Environmental Impact Statement (2005)

### **Wasatch Front Regional Council**

- 2030 Regional Transportation Plan (2007-2030)
- Ogden-Layton Urbanized Census Maps
- Transportation Improvement Plan (2008-2013)
- Congestion Management Process